## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Procedure Qualification Record (PQR) Test

Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

01.28 File #:

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-000242 Address: 333 Burma Road **Date Inspected:** 27-Jun-2007

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 630 **OSM Departure Time:** 1500 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Benicia, CA

**CWI Name:** Michael Johnson **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No **Weld Procedures Followed:** Yes No N/A N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** 

**Delayed / Cancelled:** Yes No N/A 34-0006

**Component:** 

## **Summary of Items Observed:**

**Bridge No:** 

Caltrans Quality Assurance (QA) Inspector Mary Madere is present at the Ironworkers Apprenticeship Training Facility as requested by ABF for the continuing purpose of witnessing Procedure Qualification Record (PQR)tests. On this date, the QA Inspector observed the following personnel present: Smith-Emery Company's Quality Control (QC) Representative Certified Welding Inspector (CWI) Mr. Michael Johnson, ABF Representatives Mr. Tommy Gibson and Mr. Rick Clayborn and welder Mr. Dan Gordon.

The QA Inspector observed ABF Representative Mr. Rick Clayborn as he cut sections from the PQR test plate identified as ABF-PQR-021-1B, and then acid etched these sections to determine the quality of the identified PQR that was discontinued on the previous date due to reoccurring porosity. Quality Control Representative Mr. Michael Johnson performed a visual inspection of the acid etched sections, and stated that he did not see porosity in these cross sections.

The QA Inspector observed ABF Representative Mr. Rick Clayborn and welder Mr. Dan Gordon as they welded a practice test plate in preparation for a fourth attempt of a PQR test, which was previously identified as ABF-PQR-021-1B. The next attempt of this PQR will be identified as ABF-PQR-021-1C. Quality Control Representative Mr. Michael Johnson stated that ABF would make adjustments to the welding parameters for this fourth attempt to see if it eliminates the reoccurring problem with porosity. Welding parameters recorded by the QA Inspector during this practice test are as follows: 370 amps, 28.5 volts, a travel speed of 228 millimeters per minute and a shielding gas flow of approximately 45 cubic feet per minute. After welder Dan Gordon deposited three weld passes on the practice test plate, ABF Representative Mr. Rick Clayborn elected to discontinue this practice test.

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The QA Inspector observed Quality Control Representative Mr. Michael Johnson as he attached white envelopes to the completed PQR test plates that have been prepared for shipment for radiographic testing and destructive testing. Included in these envelopes are copies of the welding procedure specification, a Quality Control visual sign off sheet and a copy of the Caltrans Sample Identification Card, TL-101. As of this date, ABF has five completed PQR test plates being shipped for radiographic testing and six completed PQR test plates being shipped for destructive testing.









#### **Summary of Conversations:**

Quality Control Representative Mr. Michael Johnson informed the QA Inspector that PQR testing would continue on the following date.

ABF Representative Mr. Tommy Gibson stated that at this time, he was not sure where the PQR test plates were going for radiographic testing and he will be instructed on the following date where to deliver them.

ABF Representative Mr. Tommy Gibson stated that he believes all of the PQR test plates will be fracture critical.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials

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for your project.

**Inspected By:** Madere, Mary Quality Assurance Inspector

**Reviewed By:** Mertz,Robert QA Reviewer